

MILANO[®]

THERMOPLASTIC



**Corrosion Resistant
Valves & Fittings**



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P200 Series

Molded-In-Place One Piece Ball Valves

BODY MATERIALS: PVC, CPVC

SIZES: 1/2" – 4"

END TYPES: Threaded, Socket or CTS

SEAT: EPDM or PTFE

"O" - RING: EPDM or FPM

TEST PRESSURE: 225 PSI

WORKING PRESSURE: 150 PSI

PRESSURE RATING:

150 PSI @ 73° F

MAX. TEMPERATURE:

140° F (PVC)

MAX. TEMPERATURE:

180° F (CPVC)

Models	Body	Ends	Seats	Seals	Sizes
P200	Schd 40 PVC	NPT	EPDM	EPDM	1/2" - 4"
P200S	Schd 40 PVC	Socket	EPDM	EPDM	1/2" - 4"
P200-80	Schd 80 PVC	NPT	EPDM	EPDM	1/2" - 4"
P200S-80	Schd 80 PVC	Socket	EPDM	EPDM	1/2" - 4"
P200CTS	CPVC	CTS	PTFE	EPDM	1/2" - 2"
P201	Schd 80 PVC	NPT	PTFE	EPDM	1/2" - 4"
P201S	Schd 80 PVC	Socket	PTFE	EPDM	1/2" - 4"
P202	Schd 80 PVC	NPT	PTFE	FPM	1/2" - 2"
P202S	Schd 80 PVC	Socket	PTFE	FPM	1/2" - 2"
P203	CPVC	NPT	PTFE	EPDM	1/2" - 2"
P203S	CPVC	Socket	PTFE	EPDM	1/2" - 2"



- Low cost & convenient operation
- Various applications: For water supply, building, housing, factory & marine equipment, water and waste treatment, chemical plants, agriculture, irrigation, multiple industrial uses etc.
- Severe shock, loads and stress are absorbed by the valve body, not the ball and seat, minimizing the chance of uneven wear and leakage.
- Excellent flow characteristics.
- Suitable for hot water systems (CPVC).
- Manufactured in compliance with ASTM F1970
- Female solvent-weld socket dimensions : ASTM D2467
- Female pipe thread dimensions: ASTM F1498 and ANSI/ASME B1.20.1, where applicable.
- Not recommended for service or test with compressed air gases.

P200 Series

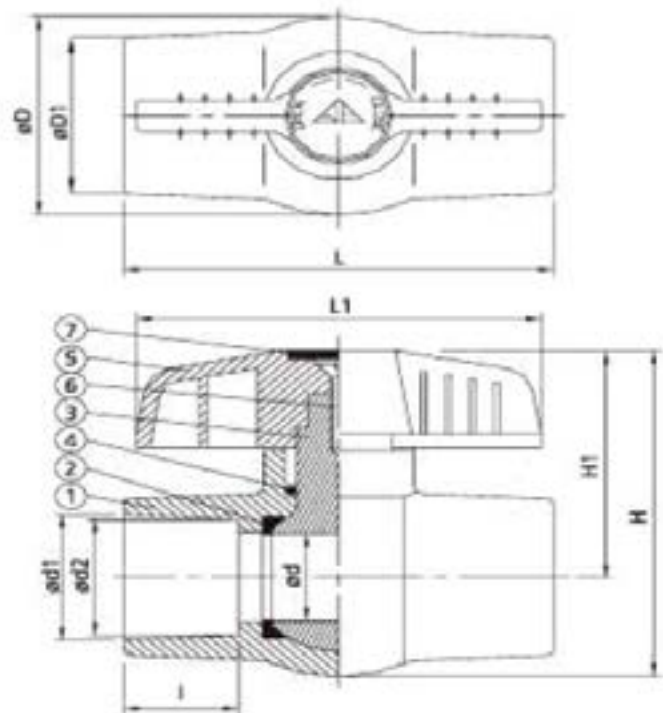
Molded-In-Place One Piece Ball Valves

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.39	2.89	3.52	4.52
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37	2.87	3.49	4.49
$\varnothing D$	1.50	1.93	2.24	2.48	2.95	3.62	4.33	5.24	6.69
$\varnothing D1$	1.18	1.50	1.77	2.13	2.44	3.03	3.62	4.17	5.31
$\varnothing d$	0.55	0.79	0.98	1.18	1.42	1.83	2.28	3.03	3.86
H	2.52	3.11	3.86	3.90	4.53	5.31	6.30	7.48	9.17
H1	1.69	2.13	2.56	2.64	3.07	3.50	4.13	4.88	5.83
I	0.87	1.00	1.12	1.25	1.38	1.50	1.75	1.88	2.25
L	3.27	3.74	4.17	4.49	5.12	5.79	8.03	9.02	11.81
L1	2.76	3.46	3.94	3.94	4.29	5.28	7.01	8.82	10.87
Thd./in. NPT	14	14	11.5	11.5	11.5	11.5	8	8	8
Cv	8	15	29	75	90	140	330	480	600

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

CPVC	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing D$	1.26	1.56	2.05	2.24	2.48	3.11
$\varnothing D1$	0.94	1.18	1.50	1.77	2.13	2.58
$\varnothing d1$	0.63	0.88	1.14	1.39	1.64	2.14
$\varnothing d2$	0.62	0.87	1.12	1.37	1.62	2.12
$\varnothing d$	0.49	0.72	0.93	0.98	1.18	1.42
H	1.93	2.52	2.54	3.66	3.86	4.53
H1	1.34	1.73	2.13	2.56	2.64	3.07
I	0.50	0.70	0.90	1.10	1.30	1.70
L	2.68	3.23	3.74	4.17	4.49	5.69
L1	2.36	2.76	3.46	3.94	3.94	4.29

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Seat	EPDM, PTFE	2
3	Ball	PVC, CPVC	1
4	O-Rings	EPDM, FPM	1
5	Handle	ABS	1
6	Screw	Steel - Zn Plated	1
7	Cap	ABS	1



P200U

True Union Ball Valves

BODY MATERIALS:

PVC, CPVC or PVDF

SIZES: 1/2" – 4"

END TYPES: Threaded
or Socket

PRESSURE RATING:

150 PSI @ 73° F

MAX. TEMPERATURE:

140° F (PVC)

MAX. TEMPERATURE:

180° F (CPVC)

TEST PRESSURE: 225 PSI

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P200U</i>	Schd 80 PVC	*	PTFE	EPDM	1/2" - 4"
<i>P200U-40</i>	Schd 40 PVC	Socket	PTFE	EPDM	1/2" - 2"
<i>P200UV</i>	Schd 80 PVC	Socket	PTFE	FPM	1/2" - 4"
<i>P200UC</i>	CPVC	*	PTFE	EPDM	1/2" - 4"
<i>P200UP</i>	PVDF	IPS	PTFE	FPM	1/2" - 4"

* 1/2" to 2" supplied with both NPT and socket unions in box. 2 1/2" to 4" supplied with socket ends as standard. NPT unions available upon request.



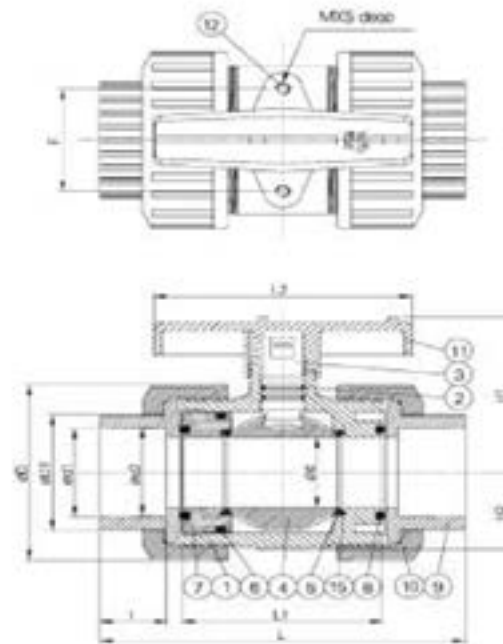
- Seals in both directions.
- Unique double union/double block design permits in-line maintenance without disconnecting pipe.
- External adjustment allows compensation for seat wear.
- Quick and easy disassembly without the use of special tools. The handle doubles as a spanner wrench.
- Built-in actuator mounting pad.
- Applications: Isolation valves, water treatment, water features, fountains, aquariums, landfills, swimming pools, power plants, mining, transportation, chemical processing.
- Manufactured in compliance with ASTM F1970
- Female solvent-weld socket dimensions: ASTM D2467
- Female pipe thread dimensions: ASTM F1498 and ANSI/ASME B1.20.1, where applicable.
- Not recommended for service or test with compressed air or gases.

P200U

True Union Ball Valves

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.38	2.89	3.52	4.52
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37	2.87	3.49	4.49
$\varnothing D$	1.83	2.17	2.60	3.23	3.86	4.72	5.51	6.42	8.86
$\varnothing D1$	1.22	1.46	1.77	2.13	2.56	3.11	3.62	4.25	5.75
$\varnothing d$	0.51	0.71	0.91	1.18	1.50	1.89	2.40	2.72	3.90
H1	1.85	2.24	2.60	2.91	3.43	4.17	4.57	5.12	7.01
H2	0.83	1.02	1.30	1.50	1.61	2.09	-	-	-
I	0.87	1.00	1.13	1.25	1.38	1.50	1.75	1.88	2.25
L	4.49	5.31	5.87	6.61	6.89	8.19	10.83	11.97	13.07
L1	2.36	2.87	3.11	3.46	3.74	4.49	5.43	6.22	6.93
L2	3.07	3.62	3.94	4.33	4.76	5.79	7.09	8.82	10.94
Thd./in. NPT	14	14	11.5	11.5	11.5	11.5	8*	8*	8*
S	0.31	0.31	0.43	0.43	0.43	0.59	-	-	-
F	1.18	1.30	1.57	1.85	2.05	2.76	-	-	-
M	M5	M6	M6	M8	M8	M8	-	-	-
Cv	8	15	29	75	90	140	330	480	600

No.	Part	Material	Qty
1	Body	PVC, CPVC, PVDF	1
2	Stem-O-Ring	EPDM, FPM	2
3	Stem	PVC, CPVC, PVDF	1
4	Ball	PVC, CPVC, PVDF	1
5	Seat	PTFE	2
6	Carrier-O-Ring	EPDM, FPM	1
7	Seal Carrier	PVC, CPVC, PVDF	1
8	Union O-Ring	EPDM, FPM	2
9	Union Ends	PVC, CPVC, PVDF	2
10	Union Nut	PVC, CPVC, PVDF	2
11	Handle	ABS	1
12	Insert Nut	C3604	2,4
15	Seat O-Ring	EPDM, FPM	2



P200F

True Union Ball Valves

BODY MATERIALS:

PVC, CPVC

SIZES: 1/2" – 4"

END TYPES: Flanged

PRESSURE RATING:

150 PSI @ 73° F

MAX. TEMPERATURE:

140° F (PVC)

MAX. TEMPERATURE:

180° F (CPVC)

TEST PRESSURE: 225 PSI

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P200F</i>	Schd 80 PVC	Flanged	PTFE	EPDM	1/2" - 4"
<i>P200FC</i>	CPVC	Flanged	PTFE	EPDM	1/2" - 4"



- Seals in both directions.
- Unique double union/double block design permits in-line maintenance without disconnecting pipe.
- External adjustment allows compensation for seat wear.
- Quick and easy disassembly without the use of special tools. The handle doubles as a spanner wrench.
- Built-in actuator mounting pad.
- Applications: Isolation valves, water treatment, water features, fountains, aquariums, landfills, swimming pools, power plants, mining, transportation, chemical processing.
- Manufactured in compliance with ASTM F1970
- Female solvent-weld socket dimensions: ASTM D2467
- Female pipe thread dimensions: ASTM F1498 and ANSI/ASME B1.20.1, where applicable.
- Not recommended for service or test with compressed air or gases.

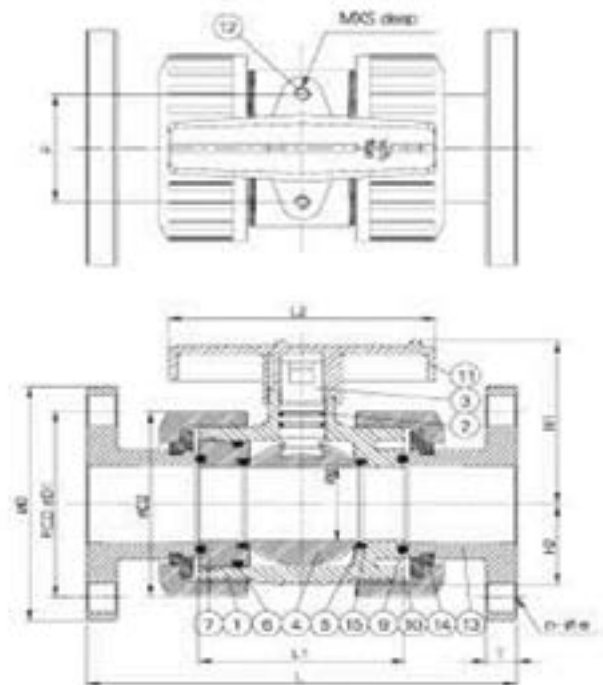
P200F

True Union Ball Valves

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
$\varnothing D$	3.50	3.86	4.25	4.61	5.00	5.98	7.01	7.52	9.02
$\varnothing D1$	2.40	2.76	3.11	3.50	3.90	4.76	5.51	5.98	7.52
$\varnothing D2$	1.83	2.17	2.60	3.23	3.86	4.72	5.51	6.42	8.86
$\varnothing d$	0.51	0.71	0.91	1.18	1.50	1.89	2.40	2.72	3.90
H1	1.85	2.24	2.60	2.91	3.43	4.17	4.57	5.12	7.01
H2	0.83	1.02	1.30	1.54	1.61	2.09	-	-	-
n- $\varnothing e$	4 - 0.63	4 - 0.63	4 - 0.63	4 - 0.63	4 - 0.63	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75
L	5.63	6.77	7.36	7.48	8.35	9.21	10.20	11.97	14.65
L1	2.36	2.87	3.11	3.46	3.74	4.49	5.43	6.22	6.93
L2	3.07	3.62	3.94	4.33	4.76	5.79	7.09	8.82	10.94
T	0.51	0.59	0.59	0.63	0.67	0.67	0.71	0.75	0.79
S	0.31	0.31	0.43	0.43	0.43	0.59	-	-	-
F	1.18	1.30	1.57	1.85	2.05	2.76	-	-	-
M	M5	M6	M6	M8	M8	M8	-	-	-
Cv	8	15	29	75	90	140	330	480	600

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Stem-O-Ring	EPDM, FPM	2
3	Stem	PVC, CPVC	1
4	Ball	PVC, CPVC	1
5	Seat	PTFE	2
6	Carrier-O-Ring	EPDM, FPM	1
7	Seal Carrier	PVC, CPVC	1
8	Union O-Ring	EPDM, FPM	2
9	Union Ends	PVC, CPVC	2
10	Union Nut	PVC, CPVC	2
11	Handle	ABS	1
12	Insert Nut	C3604	2,4
13	Flange	PVC, CPVC	2
15	Seat O-Ring	EPDM, FPM	2



P200SU

Single Union Ball Valves

BODY MATERIALS:

PVC, CPVC

SIZES: 1/2" – 2"

END TYPES:

Threaded, Socket

SEAT: PTFE

"O" - RING: EPDM or FPM

WORKING PRESSURE:

150 PSI @ 73° F

MAX. TEMPERATURE:

140° F (PVC)

MAX. TEMPERATURE:

180° F (CPVC)

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P200SU</i>	Schd 80 PVC	NPT	PTFE	EPDM	1/2" - 2"
<i>P200SUS</i>	Schd 80 PVC	Socket	PTFE	EPDM	1/2" - 2"
<i>P200SUC</i>	CPVC	NPT	PTFE	EPDM	1 1/2"



P200SU

- Compact-fits in tight spaces.
- One-way blocking union ball valve.
- Easy manual operation.
- Not recommended for service or test with compressed air or gases.

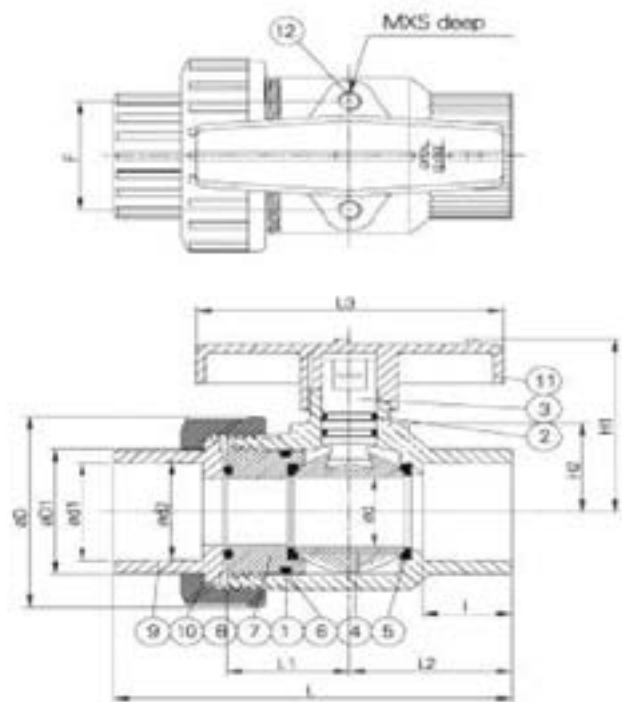
P200SU

Single Union Ball Valves

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37
$\varnothing D$	1.83	2.17	2.60	3.23	3.86	4.72
$\varnothing D1$	1.22	1.46	1.77	2.13	2.56	3.11
$\varnothing d$	0.51	0.71	0.91	1.18	1.50	1.89
H1	1.85	2.24	2.60	2.91	3.43	4.17
H2	0.83	1.02	1.30	1.50	1.57	2.01
I	0.87	1.00	1.13	1.25	1.38	1.50
L	3.86	4.53	4.92	5.59	6.02	7.36
L1	1.18	1.46	1.54	1.73	1.81	2.20
L2	1.61	1.85	2.01	2.24	2.56	3.27
L3	3.07	3.62	3.94	4.33	4.76	5.79
Thd./in. NPT	14	14	11.5	11.5	11.5	11.5
S	0.31	0.31	0.43	0.43	0.43	0.59
F	1.18	1.30	1.57	1.85	2.05	2.76
M	M5	M6	M6	M8	M8	M8
Cv	8	15	29	75	90	140

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Stem-O-Ring	EPDM	2
3	Stem	PVC, CPVC	1
4	Ball	PVC, CPVC	1
5	Seat	PTFE	2
6	Carrier-O-Ring	EPDM	1
7	Seal Carrier	PVC, CPVC	1
8	Union O-Ring	EPDM	1
9	Union Ends	PVC, CPVC	1
10	Union Nut	PVC, CPVC	1
11	Handle	ABS	1
12	Insert Nut	C3604	2



P200SUE

Economy Single Union Ball Valves

BODY MATERIALS:

PVC

SIZES: 1/2" – 2"

END TYPES:

Threaded, Socket

SEAT: PTFE

"O" - RING: EPDM or

FPM

WORKING PRESSURE:

150 PSI @ 73° F

MAX. TEMPERATURE:

140° F

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P200SUE</i>	Schd 40 PVC	Socket	PTFE	EPDM	1 1/2" - 2"



P200SUE

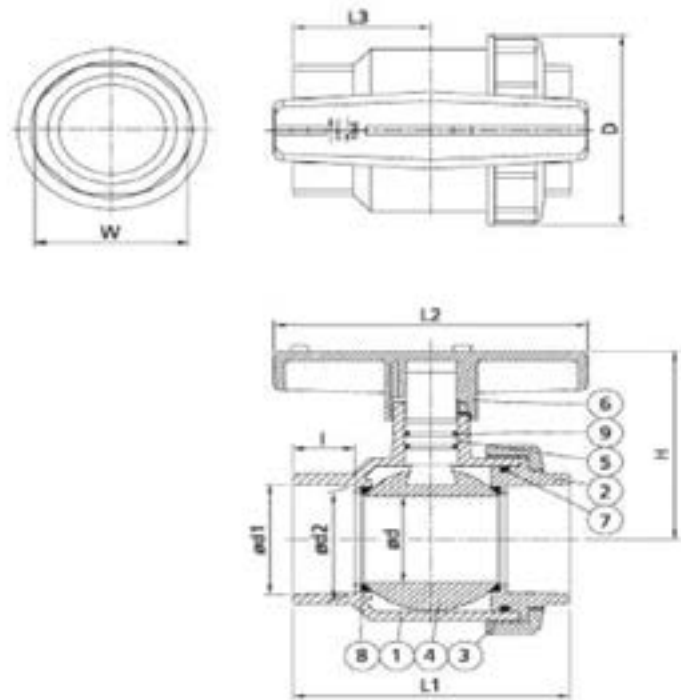
- Self lubricating PTFE Seats are corrosion resistant and resistant to most chemicals.
- EPDM O-Ring on union end.
- Low cost
- Light weight and compact design suitable for plumbing, pool and spa applications.
- Not recommended for service or test with compressed air or gases.

P200SUE

Single Union Ball Valves

Size	1 1/2"	2"
$\varnothing d1$	1.91	2.39
$\varnothing d2$	1.89	2.37
$\varnothing D$	3.44	4.13
$\varnothing d$	1.52	1.89
H	3.35	4.09
W	2.36	2.76
I	1.09	1.16
L1	4.53	5.12
L2	4.76	5.79
L3	2.22	2.55

No.	Part	Material	Qty
1	Body	PVC	1
2	End Connector	PVC	1
3	Union Nut	PVC	1
4	Ball	PVC	1
5	Stem	PVC	1
6	Handle	ABS	1
7	Union O-Ring	EPDM	1
8	Seats	PTFE	2
9	Stem O-Ring	EPDM	2



P460 Ball Check Valves

P560 Ball Foot Valves

BODY MATERIALS:

PVC, CPVC

SIZES: 1/2" – 2"

END TYPES: Threaded, Socket

SEAL: EPDM or FPM

TEST PRESSURE:

150 PSI @ 73° F

WORKING PRESSURE:

150 PSI

MAXIMUM TEMPERATURE:

140° F (PVC)

MAXIMUM TEMPERATURE:

180° F (CPVC)

MINIMUM FLOW PRESSURE:

2 - 4 PSI

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P460</i>	Schd 80 PVC	NPT	EPDM	EPDM	1/2" - 2"
<i>P460S</i>	Schd 80 PVC	Socket	EPDM	EPDM	1/2" - 2"
<i>P460C</i>	CPVC	NPT	EPDM	EPDM	1/2" - 2"
<i>P460CS</i>	CPVC	Socket	EPDM	EPDM	1/2" - 2"
<i>P460P</i>	PVDF	NPT	PTFE	FPM	1/2" - 2"
<i>P560</i>	Schd 80 PVC	NPT	EPDM	EPDM	1/2" - 2"
<i>P560S</i>	Schd 80 PVC	Socket	EPDM	EPDM	1/2" - 2"
<i>P560C</i>	CPVC	NPT	EPDM	EPDM	1/2" - 2"
<i>P560CS</i>	CPVC	Socket	EPDM	EPDM	1/2" - 2"



- Corrosion resistant.
- Good flow characteristics.
- Easily converted to foot valve by addition of optional (sold separately) thermoplastic screen.
- The ball seals by gravity in the vertical position and at 2 - 4 PSI, back pressure, in positions other than vertical.
- Recommended for commercial and industrial applications where backflow prevention is desired.
- Unidirectional. Arrow indicates the direction of flow.
- Not recommended for use in petroleum-based media.

P460 Ball Check Valves

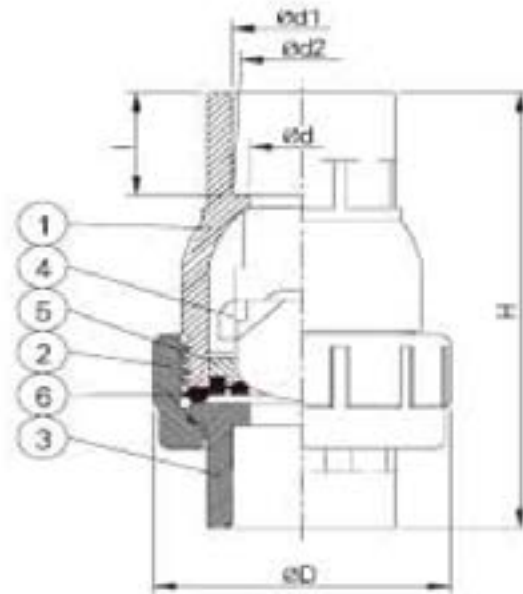
P560 Ball Foot Valves

P460

Size	1/2"	3/4"	1"	1 1/2"	2"
$\varnothing d1$	0.85	1.06	1.32	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.89	2.37
$\varnothing D$	1.97	2.44	2.83	3.82	4.21
$\varnothing d$	0.51	0.79	0.98	1.57	1.97
H	3.66	4.29	4.80	6.10	7.01
I	0.87	1.00	1.13	1.38	1.50
Ths./in. NPT	14	14	11.5	11.5	11.5
Cv	5.6	15	23	83	115

The Cv Factor are the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

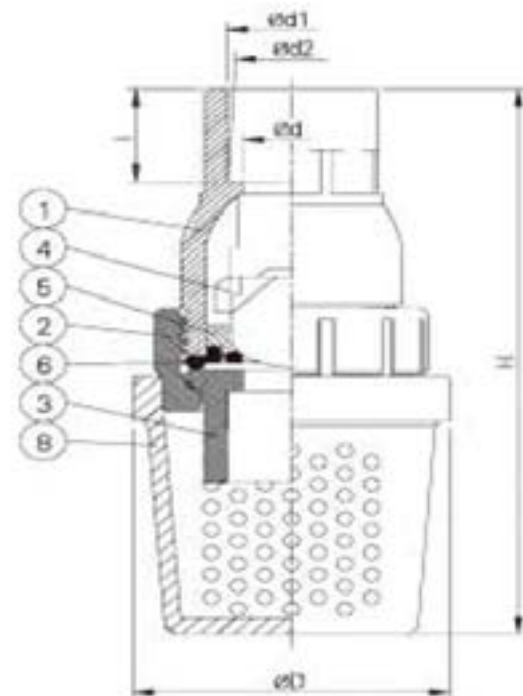
No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Union Nut	PVC, CPVC	1
3	Connector	PVC, CPVC	1
4	Ball	PVC, CPVC	1
5	Gland	PVC, CPVC	1
6	Seal	EPDM, FPM	1



P560

Size	1/2"	3/4"	1"	1 1/2"	2"
$\varnothing d1$	0.85	1.06	1.32	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.89	2.37
$\varnothing D$	2.40	2.80	3.27	4.37	1.88
$\varnothing d$	0.51	0.79	0.98	1.57	1.97
H	5.39	6.06	6.65	8.03	9.49
I	0.87	1.00	1.13	1.38	1.50
Ths./in. NPT	14	14	11.5	11.5	11.5
Cv	5.6	15	23	83	115

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Union Nut	PVC, CPVC	1
3	Connector	PVC, CPVC	1
4	Ball	PVC, CPVC	1
5	Gland	PVC, CPVC	1
6	Seal	EPDM, FPM, NBR	1
7	Filter	PVC, CPVC, PVDF	1



P460U

True Union Ball Check Valve

BODY MATERIALS: PVC, CPVC

SIZES: 1/2" – 2"

END TYPES: Socket or Threaded

TEST PRESSURE: 225 PSI

WORKING PRESSURE:

150 PSI @ 73° F

MAXIMUM TEMPERATURE:

140° F (PVC)

MAXIMUM TEMPERATURE:

180° F (CPVC)

MINIMUM FLOW PRESSURE: 5 PSI

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P460U</i>	Schd 80 PVC	*	PTFE	EPDM	1/2" - 2"
<i>P460UC</i>	CPVC	*	PTFE	EPDM	1/2" - 2"

* All sizes are supplied with both NPT and socket unions.



- Corrosion resistant.
- Good flow characteristics.
- Quick and easy disassembly without the use of special tools.
- Ball seals by gravity in vertical position, only 2-4 PSI needed in position other than vertical.
- Unidirectional. Arrow indicates direction of flow.
- True union type ends.

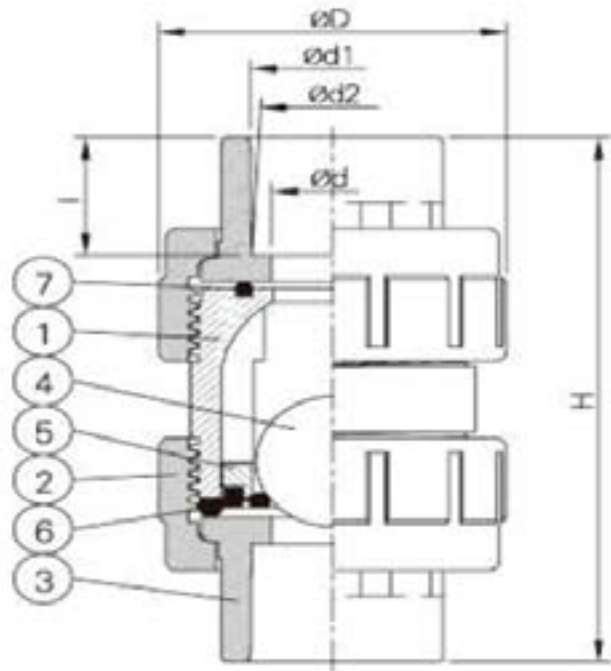
P460U

True Union Ball Check Valve

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37
$\varnothing D$	1.97	2.44	2.83	3.82	3.82	4.21
$\varnothing d$	0.51	0.79	0.98	1.24	1.61	1.97
H	3.78	4.41	5.00	6.26	6.26	7.28
I	0.87	1.00	1.13	1.25	1.38	1.50
Cv	5.6	15	23	80	83	115

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Union Nut	PVC, CPVC	2
3	End Connector	PVC, CPVC	2
4	Ball	PVC, CPVC	1
5	Gland	PVC, CPVC	1
6	Seal	EPDM	1
7	O-Ring	EPDM	1



P32

In-Line Check Valves

BODY MATERIALS: PVC

SIZES: 1/2" – 2"

END TYPES:

Threaded, Socket

SEAL: EPDM

TEST PRESSURE: 225 PSI

WORKING PRESSURE: 150
PSI @ 73° F

MAXIMUM TEMPERATURE:
140° F

<i>Models</i>	<i>Body</i>	<i>Style</i>	<i>Ends</i>	<i>Seals</i>	<i>Sizes</i>
<i>P32</i>	Schd 40 PVC	Spring Check	NPT	EPDM	1/2" - 2"
<i>P32S</i>	Schd 40 PVC	Spring Check	Socket	EPDM	1/2" - 2"



- Maintenance free operation.
- Minimum flow pressure of 2 PSI.
- Use any place to stop backflow and siphoning-swimming pools, hot tubs, spas, solar equipment, industrial applications, agricultural irrigation etc.
- May be installed vertically or horizontally.
- Not recommended for service or test with compressed air or gases.

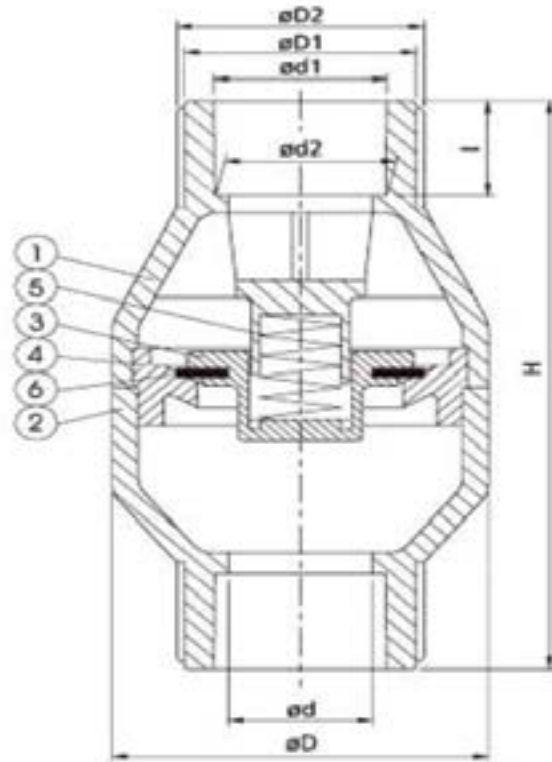
P32

In-Line Check Valves

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37
$\varnothing D$	2.20	2.20	2.87	3.58	3.58	4.21
$\varnothing D1$	1.38	1.38	1.77	2.05	2.36	2.87
$\varnothing D2$	1.50	1.50	1.89	2.17	2.48	2.99
$\varnothing d$	0.67	0.83	1.10	1.38	1.54	2.05
H	4.13	4.13	5.24	6.18	6.18	7.01
l	0.69	0.72	0.87	0.94	1.08	1.16
Thd./in. NPT	14	14	11.5	11.5	11.5	11.5
Cv	7.16	7.93	16.53	27.52	32.14	47.46

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC	1
2	Lower Body	PVC	1
3	Poppet	PVC	1
4	Connector	PVC	1
5	Spring	SUS 304	1
6	Gasket	EPDM	1



P420S Swing Check Valves

P430S Foot Swing Check Valves

BODY MATERIALS: PVC

SIZES: 3", 4"

END TYPES: Socket

TEST PRESSURE: 225 PSI

WORKING PRESSURE: 150 PSI

PRESSURE RATING:

150 PSI @ 73° F

MAXIMUM TEMPERATURE:

140° F

<i>Models</i>	<i>Body</i>	<i>Style</i>	<i>Ends</i>	<i>Seats</i>	<i>Seals</i>	<i>Sizes</i>
<i>P420S</i>	Schd 80 PVC	Swing Check	Socket	PTFE	EPDM	3" - 4"
<i>P430S</i>	Schd 80 PVC	Foot Swg Check	Socket	PTFE	EPDM	3" - 4"



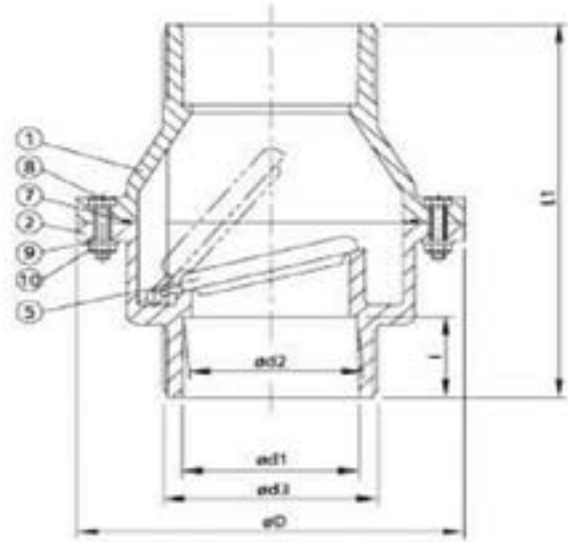
- Corrosion resistant.
- Angle seat and weighted flapper design or low pressure seal.
- Ideal for tight working spaces, easy pipe alignment.
- Directional arrow on the body.
- Horizontal or vertical applications.
- Not recommended for service or test with compressed air or gases.

P420S Swing Check Valves

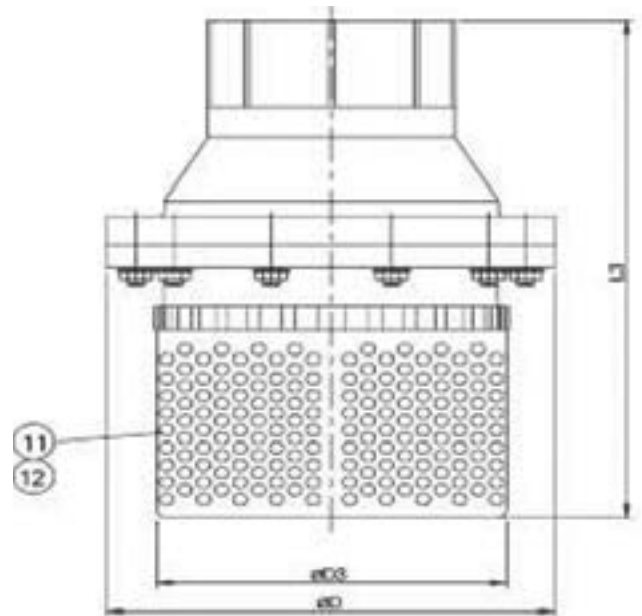
P430S Foot Swing Check Valves

Size	3"	4"
$\varnothing d1$	3.52	4.52
$\varnothing d2$	3.49	4.49
$\varnothing d3$	4.25	5.24
$\varnothing D$	7.72	8.27
$\varnothing D1$	5.98	7.52
$\varnothing D3$	6.02	6.02
L1	8.70	10.67
L3	10.83	12.60
l	1.88	2.25
Cv (P420S)	285	490

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.



No.	Part	Material	Qty
1	Upper Body	PVC	1
2	Lower Body	PVC	1
5	Disc	EPDM	1
7	O-Ring	PVC	1
8	Bolts	SUS 304	10
9	Washer	SUS 304	10
10	Nut	SUS 304	10
11	Screen	PVC	1



P440F

Flanged Swing Check Valves

BODY MATERIALS: PVC

SIZES: 2" – 8"

END TYPES: Flanged

TEST PRESSURE: 225 PSI

WORKING PRESSURE:

150 PSI @ 73° F - SIZES 2" - 3"

WORKING PRESSURE:

100 PSI @ 73° F - SIZES 4" - 6"

WORKING PRESSURE:

75 PSI @ 73° F - SIZE 8"

MAXIMUM TEMPERATURE: 140° F

<i>Models</i>	<i>Body</i>	<i>Style</i>	<i>Ends</i>	<i>Seat</i>	<i>Seals</i>	<i>Sizes</i>
<i>P440F</i>	Schd 80 PVC	Swing Check	Flanged	EPDM	EPDM	2" - 8"



- Minimum flow resistance - Low pressure drop
- Horizontal or vertical installation
- Minimum back pressure to seat the disc
- Top access cover for maintenance, without removal from pipeline.
- Not recommended for use in systems with debris or slurry.
- Not recommended for service or test with compressed air or gases.

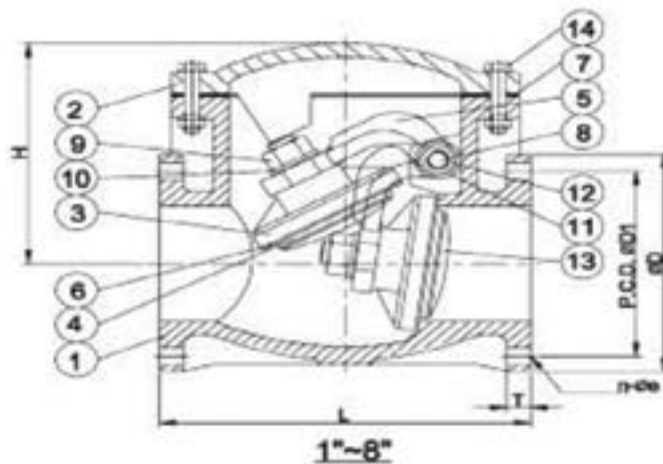
P440F

Flanged Swing Check Valves

Size	2"	2 1/2"	3"	4"	6"	8"
$\varnothing D$	5.98	7.01	7.52	9.02	11.22	13.50
$\varnothing D1$	4.76	5.51	5.98	7.52	9.49	11.77
L	7.87	9.45	10.24	11.81	15.75	19.69
H	6.50	6.63	6.65	8.54	11.22	13.31
T	0.79	0.87	0.87	0.94	1.02	1.18
In- $\varnothing e$	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75	8 - 0.91	8 - 0.91
Cv	125	255	285	490	1050	1800

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC	1
2	Bonnet	PVC	1
3	Disc	PVC	1
4	Disc Holder	PVC	1
5	Swing Arm	PVC	1
6	Seat	EPDM	1
7	Gasket	EPDM	1
8	Shaft	PTFE	1
9	Disc Nut	PVC	1
10	Disc Washer	PVC	1
11	Sheet Gasket	EPDM	1
12	Sheet Bolt	PVC	1
13	Disc Bolt	PVC	1 - 8
14	Bolt Sets	Steel (SUS 30)	6 - 16



Pressure Vs. Temperature (PSI Water, Non-Shock)
reference only

Size	30°F - 80°F	81°F - 85°F	86°F - 120°F
2"	150	135	100
2 1/2"	150	135	100
3"	150	135	100
4"	100	100	75
6"	100	100	75
8"	75	75	55

Minimum Back Pressure to Close the Valve (PSI)
reference only

Size	Horizontal	Vertical
2"	5	4
2 1/2"	5	4
3"	5.7	5
4"	5.7	5
6"	6.5	6
8"	6.5	6

P710

Diaphragm Valves

BODY MATERIALS: PVC

SIZES: 1" – 8"

END TYPES: Flanged

DIAPHRAGM: EPDM, FPM

PRESSURE RATING:

1" - 3" 150 PSI @ 73°F

4" - 6" 72 PSI @ 73°F

8" 43 PSI @ 73°F

MAXIMUM TEMPERATURE: 140°F

Models	Body	Ends	Diaphragm	Sizes
P710	Schd 80 PVC	Flanged	EPDM	1" - 8"
P710V	Schd 80 PVC	Flanged	FPM	1" - 8"

Also Available: CPVC, PP, PVDF body materials and PTFE diaphragms.



CV [GPM / (1 lbf/in ²) ^½]	
OPENING RATE: 100"	
SIZE	CV
1"	8.87
1 - 1/2"	31.09
2"	43.15
2 1/2"	90.68
3"	116.78
4"	186.78
6"	345.26
8"	700.00

- Glandless construction provides complete corrosion resistance.
- Smooth and exact operation with clear indication of opening degree.
- Adjustable stopper to avoid over tightening.
- Stainless steel (304 and 316) stems are available for use in highly corrosive environments.
- Applications: Throttling, slurry lines, chemical processing, bleach plants, aquariums, mining, water treatment, landfills, swimming pools & semiconductor manufacturing.

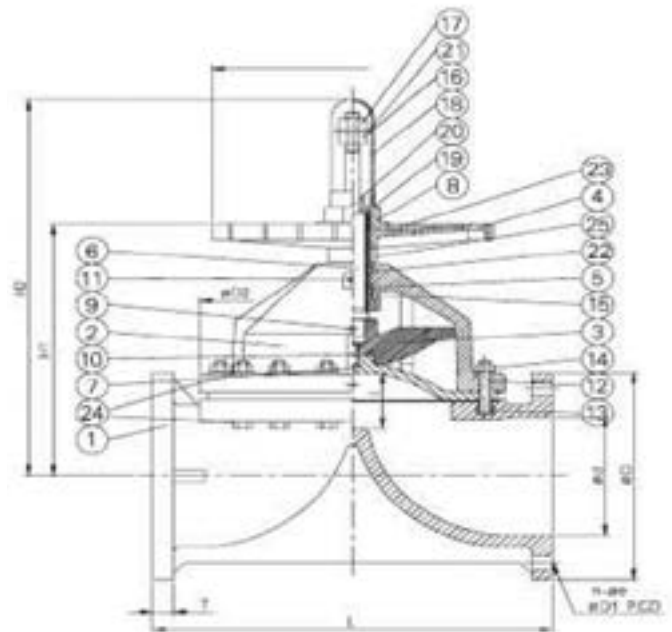
P710

Diaphragm Valves

Size	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"
<i>D</i>	4.25	5.00	5.98	7.01	7.52	9.02	11.46	13.50
<i>D1</i>	3.11	3.86	4.76	5.51	5.98	7.52	9.49	11.77
<i>D2</i>	2.48 x 3.46	4.92	5.83	7.17	7.99	10.04	15.43	17.01
<i>D3</i>	4.33	5.91	5.91	8.27	8.27	9.84	15.94	15.94
<i>d</i>	0.98	1.61	2.05	2.64	3.07	3.94	5.83	7.80
<i>L</i>	5.91	6.93	7.95	9.84	10.39	12.95	18.90	22.44
<i>T</i>	0.71	0.59	0.75	0.79	0.91	0.91	1.02	1.12
<i>H1</i>	3.86	5.12	5.83	7.44	9.84	10.83	13.15	17.72
<i>H2</i>	6.30	7.87	8.86	10.55	13.50	15.08	18.74	24.69
<i>l</i>	0.59	0.87	1.22	1.54	1.89	2.36	2.76	3.74
<i>n-Øe</i>	4 - 0.63	4 - 0.63	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75	8 - 0.91	8 - 0.91
<i>Cv</i>	8.87	31.09	43.15	90.68	116.79	186.78	345.26	700.00

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC	1
2	Bonnet	PVC	1
3	Compressor	PP + GF	1
4	Hand Wheel	PP	1
5	Sleeve	C3602	1
6	Stem	C3602	1
7	Diaphragm	EPDM, FPM	1
8	Cap	PVC	1
9	Compressor Pin	SUS 304	1
10	Inserted Metal	C3602	1
11	Grease Nipple	C3602 - 2 1/2" - 8"	1
12	Bolt & Washer	SUS 304	1" - 2" 6 sets
13	Inserted Nut	C3602	2 1/2" - 4" 8 sets
14	Nut & Washer	SUS 304	6" 12 sets
15	Thrust Bearing	PTFE 1" - 3", SUS - 4" - 8"	8" 16 sets
16	Stopper	SUS 304	1
17	Set Nut	SUS 304	1
18	Gauge Cover	ABS	1
19	Sheet Gasket	EPDM	1
20	Sheet Ring	SUS 304	1
21	Indicative Washer	ABS	1
22	O-Ring	NBR	1
23	Name Plate	PVC	1
24	Pressure Plate	SUS 304	1 - 6
25	Casing	PVC	1



P21 Series

Butterfly Valves Sizes 2"-6" With Handle

BODY MATERIALS: PVC, PVDF

SIZES: 2" – 6"

STYLE: Wafer / Lug

SEAT: EPDM or FPM

TEST PRESSURE: 225 PSI

WORKING PRESSURE:

150 PSI

PRESSURE RATING:

150 PSI @ 73°F

MAXIMUM TEMPERATURE:

140°F

Models	Body	Style	Seats	O-Ring	Disc	Sizes
P21	Schd 80 PVC	Wafer	EPDM	EPDM	PP	2" - 6"
P21V	Schd 80 PVC	Wafer	FPM	FPM	PP	2" - 6"

Also Available: CPVC, PP, PVDF body materials.



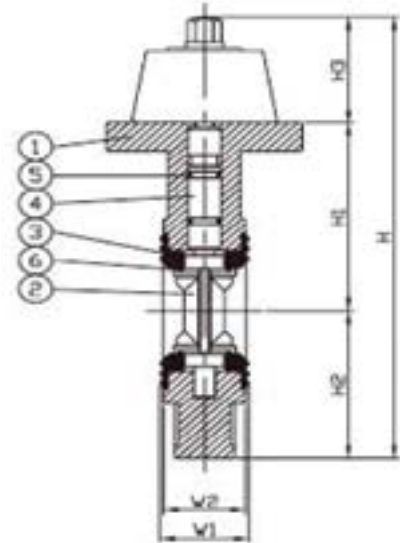
- Lever operated with 7 position latch
- Handle gives clear indication of disc position
- Corrosion resistant.
- Excellent flow characteristics.
- Compact and lightweight design for energy saving and cost-efficient operation.
- Ideally suited for applications with minimal piping space.
- Applications: Isolation valves, control valves, chemical processing, water treatment, water features, fountains, aquariums, landfills, swimming pools, power plants, mining, transportation

P21 Series

Butterfly Valves Sizes 2"-6" With Handle

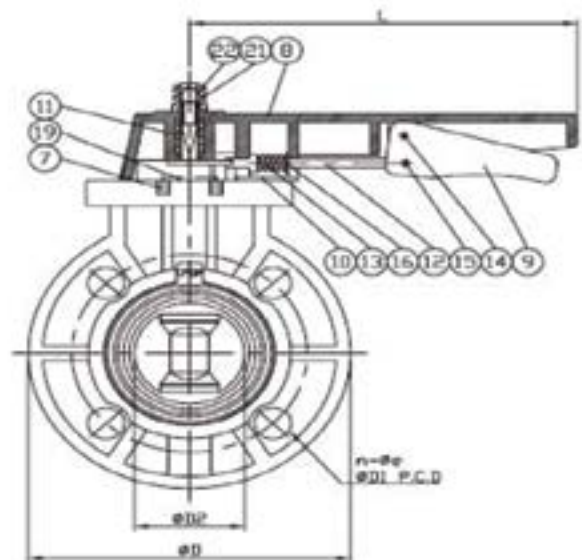
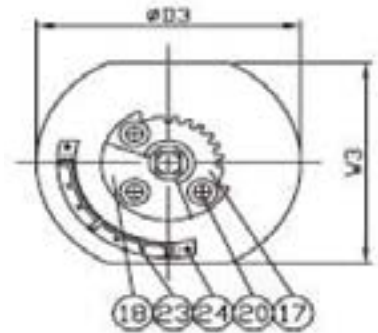
Size	2"	2 1/2"	3"	4"	5"	6"
ØD1	4.76	5.51	5.98	7.52	8.50	9.49
n-Øe	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75	8 - 0.91	8 - 0.91
ØD	6.52	7.28	7.87	9.02	10.12	11.34
ØD2	2.22	2.74	3.13	4.04	5.10	5.89
ØD3	4.17	4.69	4.88	5.30	6.46	6.69
L	7.83	7.83	7.83	9.92	11.69	11.69
H	9.76	10.51	10.96	12.52	14.72	16.04
H1	4.17	4.53	4.65	5.45	6.44	7.05
H2	3.26	3.64	3.94	4.51	5.06	5.67
H3	2.34	2.34	2.40	2.58	3.21	3.33
W1	1.67	1.85	1.85	2.24	2.68	2.76
W2	1.54	1.73	1.73	2.13	2.48	2.56
W3	3.70	3.70	3.70	3.92	4.33	3.98
Cv	120	260	310	480	830	1000

The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.



No.	Part	Material	Qty
1	Body	PVC	1
2	Disc	PP	1
3	Seat	EPDM, FPM	1
4	Stem	SUS	1
5	Stem O-Ring	EPDM, FPM	2
6	Disc O-Ring	EPDM, FPM	2
7	Insert Nut	C3602	3
8	Large Handle	PP	1
9	Small Handle	PP	1
10	Spring Lock	PP	1
11	Handle Insert	Stainless Steel	1
12	Handle Lever	SUS 304	1
13	Spring Lock	SUS 304	1
14	Spring Pin	SUS 304	1
15	Spring Pin	SUS 304	1
16	Washer	SUS 304	1
17	Locking Plate	SUS 304	1
18	Gear Seat	PVC	1
19	Stem Washer	SUS 304	1
20	Bolt	SUS 304	3
21	Nut	PVC	1
22	Insert Nut	C3602	1
23	Level	SUS 304	1
24	Rivet	SUS 304	2

Size	Torque (in/lbs)
2"	113
2 1/2"	191
3"	260
4"	391
5"	608
6"	738



P21 Series

Butterfly Valves Sizes 8"-24" With Gear Operator

BODY MATERIALS: PVC

SIZES: 8" – 12"

STYLE: Wafer / Lug

SEAT: EPDM, FPM

TEST PRESSURE:

150 PSI @ 73°F (8", 10")

100 PSI @ 73°F (12")

MAXIMUM TEMPERATURE: 140°F

Models	Body	Style	Seats	O-Ring	Disc	Sizes
P21	Schd 80 PVC	Wafer	EPDM	EPDM	PP	8" - 12"
P21V	Schd 80 PVC	Wafer	FPM	FPM	PP	8" - 12"

Also Available: CPVC, PP, PVDF body materials.
 Sizes 14" - 24" are also available.

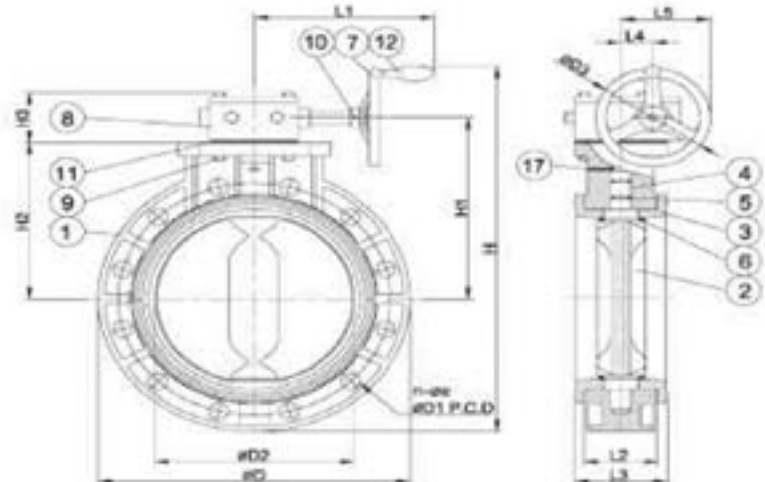


- Corrosion resistant.
- Excellent flow characteristics.
- Compact and lightweight design for energy saving and cost-efficient operation.
- Ideally suited for flow control using minimal piping space.
- Applications: Isolation valves, control valves, chemical processing, water treatment, water features, fountains, aquariums, landfills, swimming pools, power plants, mining, transportation

P21 Series

Butterfly Valves Sizes 8"-24" With Gear Operator

Size	8"	10"	12"
$\varnothing D1$	11.77	14.25	17.01
$n-\varnothing e$	8 - 0.91	12 - 0.98	12 - 0.98
$\varnothing D$	13.50	16.18	19.29
$\varnothing D2$	7.95	10.04	12.20
$\varnothing D3$	7.95	7.95	9.84
H	20.63	23.15	27.91
$H1$	9.98	11.16	13.39
$H2$	8.25	9.43	11.73
$H3$	3.05	3.05	3.07
$L1$	10.41	11.20	12.99
$L2$	3.11	4.09	5.00
$L3$	3.35	4.29	5.18
$L4$	2.36	2.36	2.36
$L5$	6.34	6.34	7.28
Cv	2300	3680	5580



The Cv Factor is the gallons of water per minute passed through the valve, with a 1 PSI pressure drop.

No.	Part	Material	Qty
1	Body	PVC	1
2	Disc	PP	1
3	Seat	EPDM, FPM	1
4	Stem	SUS	1
5	Stem O-Ring	EPDM, FPM	2
6	Disc O-Ring	EPDM, FPM	2
7	Handwheel	FC	1
8	Gear Box	FC	1
9	Bolt & Washer	SUS 304	4
10	Spring Pin	SUS	1
11	Packing	EPDM 8" - 14"	1
12	Small Handle	Steel	1
17	Pin	SUS	1

Size	Torque (in/lbs)	
	open - close	close - open
8"	1040	987
10"	2425	1212
12"	3377	2598

P820VS Flanges

P830 Rubber Gaskets

BODY MATERIALS: PVC

SIZES: 2" – 12"

ANSI CLASS 150#

Slip Ring Flanges.

GASKET MATERIALS: EPDM

SIZES: 1/2" – 12"

<i>Model</i>	<i>Style</i>	<i>Material</i>	<i>Sizes</i>	<i>ANSI Class</i>
<i>P820VS</i>	Van Stone	Schd 80 PVC	2" - 12"	150#

<i>Model</i>	<i>Material</i>	<i>Sizes</i>	<i>Standard</i>
<i>P830</i>	EPDM	1/2" - 12"	ANSI 150#



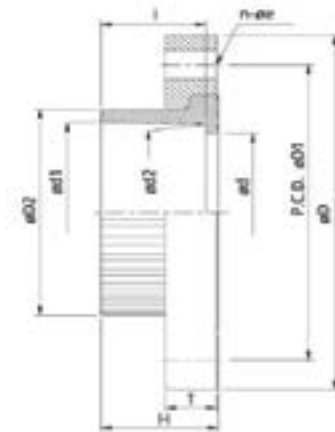
P820VS Flanges P830 Rubber Gaskets

P820VS

Size	2"	2 1/2"	3"	4"	6"	8"	10"	12"
<i>D</i>	5.98	7.01	7.56	9.02	11.14	13.50	15.98	18.94
<i>D1</i>	4.76	5.51	5.98	7.52	9.49	11.77	14.25	17.01
<i>D2</i>	2.99	3.62	4.29	5.24	7.56	9.37	11.73	13.70
<i>d</i>	2.01	2.68	3.03	4.02	6.14	8.03	10.08	12.09
<i>d1</i>	2.39	2.89	3.52	4.52	6.65	8.66	10.78	12.78
<i>d2</i>	2.37	2.87	3.49	4.49	6.61	8.61	10.74	12.74
<i>H</i>	1.69	1.93	2.13	2.52	3.35	4.65	5.91	7.52
<i>T</i>	0.79	0.94	1.02	1.10	1.26	1.42	1.65	1.65
<i>l</i>	1.50	1.75	1.88	2.25	3.00	4.02	4.84	6.50
<i>n-Øe</i>	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75	8 - 0.91	8 - 0.91	12 - 0.98	12 - 0.98

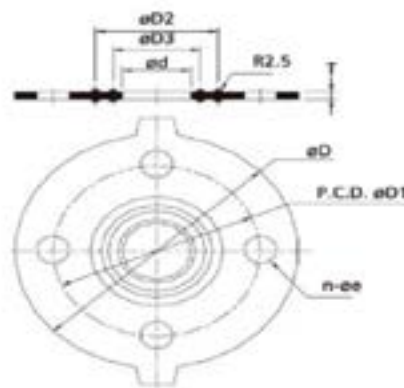
Socket diameters conform to ASTM D2467 / F439 Schedule 80 Standard.

● ANSI 150 PSI FLANGE (Van Stone)



P830

Size	1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"
<i>D</i>	3.40	3.80	4.20	4.90	5.90	6.90	7.40	8.90	10.90	13.40	15.90	18.90
<i>D1</i>	2.40	2.76	3.11	3.86	4.76	5.51	5.98	7.52	9.49	11.77	14.25	17.01
<i>D2</i>	1.60	1.90	2.10	2.70	3.30	4.00	4.40	5.40	7.50	9.70	12.10	14.02
<i>D3</i>	1.00	1.30	1.50	2.10	2.70	3.40	3.90	4.70	6.60	8.50	10.60	12.80
<i>d</i>	0.70	0.90	1.20	1.70	2.10	2.70	3.20	4.00	5.86	7.80	9.80	11.80
<i>T</i>	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
<i>n-Øe</i>	4 - 0.63	4 - 0.63	4 - 0.63	4 - 0.63	4 - 0.75	4 - 0.75	4 - 0.75	8 - 0.75	8 - 0.91	8 - 0.91	12 - 0.98	12 - 0.98



P600U

Compression Couplings

BODY MATERIALS:

PVC, CPVC

SIZES: IPS: (1/2" – 6")

CTS: (1/2" – 1")

CONNECTION TYPE:

IPS or CTS Compression

SEAL: NR

PRESSURE RATING:

150 PSI Internal @ 73°F

MAXIMUM TEMPERATURE:

140°F (PVC)

MAXIMUM TEMPERATURE:

180°F (CPVC)

Models	Body	Specifications	Ends	Seats	Seals	Sizes
P600U	PVC	ANSI - Schedule 40	IPS	NR	Buna-N	1/2" - 6"
P600CTS	CPVC	ANSI - CTS	CTS	NR	Buna-N	1/2" - 1"



- For use in general piping application, metal, plastic or copper pipe.
- Easy to operate for instant emergency piping.
- Restrain pipe after installation.
- Not recommended for service or test with compressed air or gases.

P600U

Compression Couplings

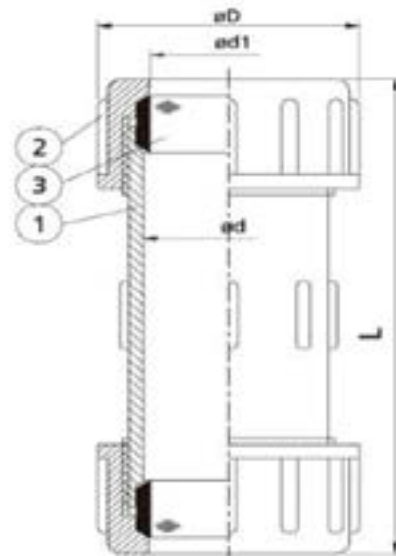
Schedule 40 Dimensions

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"
<i>D</i>	1.85	2.09	2.40	2.87	3.15	3.62	4.53	5.28	6.34	8.78
<i>d</i>	0.91	1.18	1.42	1.81	2.05	2.56	2.52	3.62	4.65	6.85
<i>d1</i>	0.83	1.04	1.31	1.65	1.89	2.37	2.87	3.49	4.49	6.61
<i>L</i>	5.04	5.31	5.59	6.02	6.81	7.68	9.92	10.87	11.93	11.22

CTS Dimensions

Size	1/2"	3/4"	1"
<i>D</i>	1.30	1.85	2.09
<i>d</i>	0.71	0.94	1.18
<i>d1</i>	0.63	0.88	1.14
<i>L</i>	4.49	5.00	5.31

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	Union Nut	PVC, CPVC	2
3	Seal	Buna-N	2



P240

Series Unions

BODY MATERIALS: PVC, CPVC

SIZES: Threaded,
 Socket: (1/2" – 4")
 CTS: (1/2" – 1")

END TYPES:

Threaded, Socket or CTS Socket

"O" - RING: EPDM

PRESSURE RATING:

150 PSI Internal @ 73°F

MAXIMUM TEMPERATURE:

140°F (PVC)

MAXIMUM TEMPERATURE:

180°F (CPVC)

<i>Models</i>	<i>Body</i>	<i>Ends</i>	<i>Seals</i>	<i>Sizes</i>
<i>P240</i>	Schd 40 PVC	IPS	EPDM	1/2" - 4"
<i>P240S</i>	Schd 40 PVC	Socket	EPDM	1/2" - 4"
<i>P241</i>	CPVC	IPS	EPDM	1/2" - 3"
<i>P241S</i>	CPVC	Socket	EPDM	1/2" - 3"
<i>P242</i>	CPVC	CTS	EPDM	1/2" - 1"
<i>P243S</i>	Schd 80 PVC	Socket	EPDM	1/2" - 3"



- Low cost.
- Easily adaptable to any type of connection.

P240

Series Unions

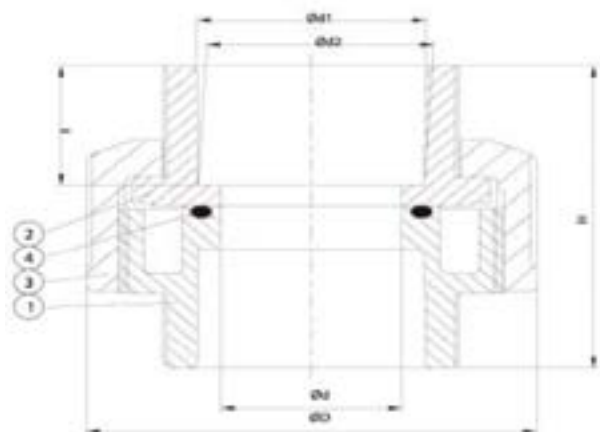
Schedule 40 Dimensions

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
<i>D</i>	1.83	2.17	2.60	3.23	3.86	4.72	5.51	6.42	8.86
<i>d</i>	0.53	0.65	0.87	1.18	1.50	1.89	2.48	2.95	3.94
<i>d1</i>	0.85	1.06	1.32	1.67	1.91	2.39	2.89	3.52	4.52
<i>d2</i>	0.84	1.05	1.31	1.66	1.89	2.37	2.87	3.49	4.49
<i>H</i>	2.20	2.52	2.83	3.43	3.54	3.86	4.49	5.00	6.38
<i>l</i>	0.87	1.00	1.13	1.25	1.38	1.50	1.75	1.88	2.25
<i>THD./in. NPT</i>	14	14	11.5	11.5	11.5	11.5	8	8	8

CTS Dimensions

Size	1/2"	3/4"	1"
<i>d1</i>	0.63	0.88	1.14
<i>d2</i>	0.62	0.87	1.12
<i>l</i>	0.77	0.81	1.03
<i>D</i>	1.50	1.83	2.17
<i>d</i>	0.49	0.73	0.96
<i>H</i>	1.89	2.20	2.52

No.	Part	Material	Qty
1	Body	PVC, CPVC	1
2	End Connector	PVC, CPVC	1
3	Union Nut	PVC, CPVC	1
4	O-Ring	EPDM	1



P230 Compression Tees

P232 Expansion Repair Couplings

BODY MATERIALS: PVC

SIZES: (1/2" – 2")

END TYPES:

Compression X Compression X NPT

PRESSURE RATING:

150 PSI Internal @ 73°F

MAXIMUM TEMPERATURE:

140°F

Model	Material	End Type	Seal	Sizes
P230	Schd 40 PVC	Compression X Compression X NPT	Buna-N	1/2" - 2"



BODY MATERIALS: PVC

SIZES: (1/2" – 2")

END TYPES:

IPS Spigot X IPS Socket

PRESSURE RATING:

150 PSI Internal @ 73°F

MAXIMUM TEMPERATURE:

140°F

Model	Material	End Type	O-Ring	Sizes
P232	Schd 40 PVC	IPS Spigot X IPS Socket	EPDM	1/2" - 2"



P230

- Suitable for instant pipe system repair.
- Suitable for IPS standard plastic and metal piping systems.
- Not recommended for service or test with compressed air or gases.

P232

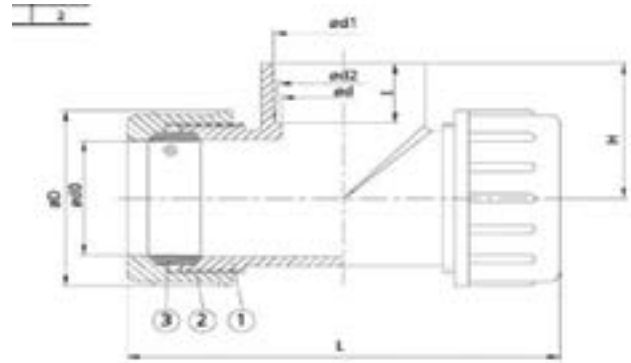
- Excellent for use in repairing broken lines or when adding additional lines or fittings.
- Internal self-lubricating EPDM O-Ring for long life and smooth movement.
- Not recommended for service or test with compressed air or gases.

P230 Compression Tees

P232 Expansion Repair Couplings

P230

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
<i>D</i>	1.85	2.05	2.40	2.83	3.15	3.62
<i>D1</i>	1.18	1.42	1.69	2.01	2.28	2.80
<i>d</i>	0.65	0.81	1.10	1.38	1.67	2.13
<i>d0</i>	0.83	1.04	1.31	1.65	1.89	2.37
<i>d1</i>	0.85	1.06	1.32	1.67	1.91	2.39
<i>d2</i>	0.84	1.05	1.31	1.66	1.89	2.37
<i>L</i>	5.00	5.20	5.65	6.26	6.75	7.44
<i>H</i>	1.44	1.75	2.17	2.40	2.70	2.80
<i>I</i>	0.87	1.02	1.24	1.37	1.49	1.23
<i>NPT Thd./in.</i>	14	14	11.5	11.5	11.5	11.5

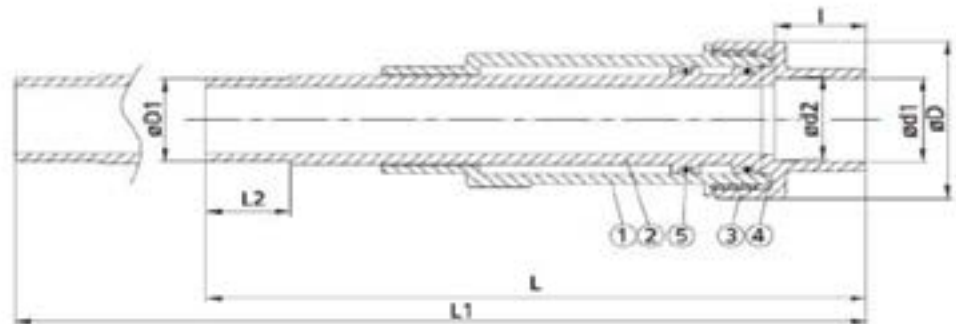


No.	Part	Material	Qty
1	Body	PVC	1
2	Union Nut	PVC	2
3	Seals	Buna-N	2

P232

Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
$\varnothing D$	1.81	2.03	2.49	2.90	3.17	3.65
$\varnothing D1$	0.84	1.05	1.31	1.66	1.66	2.37
<i>I</i>	0.81	1.08	1.22	1.34	1.40	1.46
<i>L</i>	6.73	7.56	8.78	9.78	9.80	11.28
<i>L1</i>	8.64	9.82	11.32	12.48	12.74	14.34
<i>L2</i>	0.81	1.02	1.13	1.25	1.31	1.36
$\varnothing d1$	0.85	1.06	1.32	1.67	1.91	2.39
$\varnothing d2$	0.84	1.05	1.31	1.66	1.89	2.37

No.	Part	Material	Qty
1	Body	PVC	1
2	Telescoping Connector	PVC	1
3	Union Nut	PVC	1
4	O-Ring	EPDM	1
5	O-Ring	EPDM	2



P60SCPVC

Low Pressure Series

BODY MATERIALS: CPVC

END TYPE: CTS Socket

SIZES: 1/2" – 3/4"

SEALS: EPDM

PRESSURE RATING: 100 PSI @ 180°F

MAXIMUM TEMPERATURE: 180°F

Stop & Waste Valve	Material	Seals	Sizes
P60SCPVC	CPVC	EPDM	1/2" - 3/4"

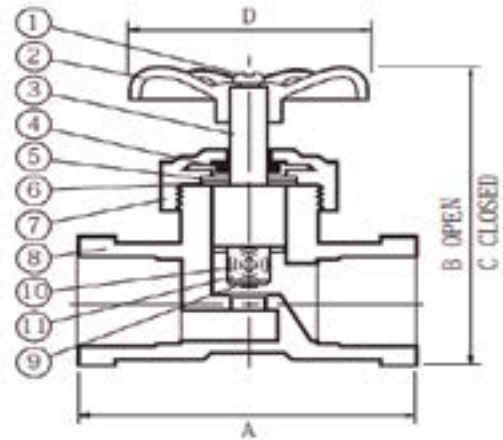


- For use with hot or cold water.
- Use with CPVC copper tube-sized pipe.
- Allows draining from non-pressure side of valve, when closed.
- Solvent ends comply with ASTM 2846
- Not recommended for service or test with compressed air or gases.

P60SCPVC

Low Pressure Series

No.	Part	Material	Qty
1	Screw	Zinc Plated Steel	1
2	Hand Wheel	PP	1
3	Stem	CPVC	1
4	O-Ring	EPDM	1
5	Washer	CELCON	1
6	Washer	EPDM	1
7	Bonnet	CPVC	1
8	Body	CPVC	1
9	Seat	Polymide Nylon	1
10	Waste Screw	Zinc Plated Steel	1
11	Waste Screw Washer	EPDM	1



Size	1/2"	3/4"
A	2.50	2.68
B	3.63	3.78
C	3.47	3.63
D	2.05	2.05

Chemical Resistance & General Properties of Plastic & Rubber

Material	abbreviation	General chemical resistance	Max. Service temperature	
			Continuous	Short hours
Rigid Polyvinyl Chloride (Rigid PVC)	PVC	Resistant against most of acids, alkalis and salts of high to low concentration level. However the material tends to be attacked by some chemicals- such as aromatic hydrocarbon, ketones, esters and chlorinated hydrocarbon.	50 °C	60 °C
Heat-resistant Rigid Polyvinyl Chloride (Heat-resistant PVC)	CPVC	Resistance properties are nearly the same as rigid PVC. Having a high heat-resistance, this is serviceable in the temperature range higher than rigid PVC.	90 °C	100 °C
Polypropylene	PP	Not stable against strong acids such as concentrated nitric acid and chrome acid mixture, but this is resistant against other acids, alkalis and salts. Resistant against many organic solvents (specifically the solvent with active group), but tends to be attacked by chlorine-containing solvents. aliphatic series and aromatic hydro-carbon.	90 °C	100 °C
Vinylidene Fluoride	PVDF	Highly resistant up to a high temperature range against ordinary acids & salts and organic chemicals, but broken down by fuming sulfuric acid and strong basic amines. Also, use in conditions in which ketones, amides, esters, organic solvent and alkali are limited.	120 °C	150 °C
Ethylene Propylene Rubber	EPDM	Provided with an excellent ozone-resistance and chemical-resistance. Comparatively resistant against ketone and ester, but less resistant against aromatic & aliphatic families, and gasoline and oil.	90 °C	120 °C
Polytera-fluoroethylene (Trade name, Teflon®)	PTFE	Resistant against ordinary acid and alkali, and not dissolved nor changed by ordinary solvent medium. Attacked by melted alkali metal and in a high temperature, by fluorine and chlorine trifluoride.	250 °C	300 °C
Fluororubber (Trade name. Viton®)	FPM	Most chemical-resistant among all rubber families. Has a good resistance against strong oxidizing acid such as concentrated sulfuric acid and nitric acid; resistant against aliphatic and aromatic families and oils, but attacked by ketones, ammonia anhydride, concentrated caustic soda, etc.	150 °C	200 °C

BASIC PROPERTIES OF PLASTIC

Item	Unit	Rigid PVC (UPVC)	Heat-resistant (CPVC)	Polypropylene (PP)	Vinylidene fluoride (PVDF)
Specific gravity	-	1.43	1.5	0.92	1.78
Water absorption	mg/cm ²	0.1 and less	0.15 and less	0.01 and less	0.03 and less
Tensile strength	kgf/cm ²	500 and over	500 and over	280 and over	500 and over
Tensile strength(at 90°C)	kgf/cm ²	—	250 and over	150 and over	250 and over
Tensile Modulus	kgf/cm ²	3x10 ⁴	3.2x10 ⁴	1.2x10 ⁴	1.5x10 ⁴
Bending strength	kgf/cm ²	900 and over	900 and over	350 and over	900 and over
Poisson's ratio	-	0.38	0.35	0.44	0.28
Charpy impact strength	kgf/cm/cm ²	7-10	4-5	7-10	18-20
Heat distortion temperature (4.6kg f/W)	°C	74	110	105	145
Temperature limit for continuous service	°C	60	90	90	120
Linear thermal coefficient of expansion	/ °C	7x10 ⁻⁵	7x10 ⁻⁵	12x10 ⁻⁵	12x10 ⁻⁵
Thermal conductivity	kcal/mh C	0.13	0.12	0.08	0.11
Electric strength	kv/mm	40 and over	40 and over	26	30
Specific volume resistance	H cm	5.3x10 ¹⁵	5.3x10 ¹⁵	4.9x10 ¹⁵	5x10 ¹⁵



CHEMICAL RESISTANCE OF MATERIAL

Chemicals	Concentration (%)	Temperature (°C)	Material						
			PVC	CPVC	PP	PVDF	PTFE	EPDM	FPM
Sodium chloride	Saturated Water Solution	40	√	√	√	√	√	√	√
		60	√	√	√	√	√	√	√
		80		√	√	√	√	√	√
Hydrochloric acid	35	40	√	√	√	√	√	√	√
		60	O	√	√	√	√	√	√
		80		O	O	√	O	O	O
Caustic soda	50	40	√	√	√	O	√	√	x
		60	√	√	√	Δ	x	O	
		80		√	O	x	√	Δ	
Chromic acid	20	40	√	√	x	√	√	O	√
		60	O	√		√	√	x	O
		80		O		√	√		O
Acetic acid	50	40	O	O	O	√	√	O	O
		60	Δ	Δ	Δ	√	√		O
		80		x		O	√		Δ
Soda hypochlorite	13	40	√	√	Δ	√	√	x	√
		60	O	O		O	√		
		80				x	√		
Nitric acid	50	40	O	O	√	√	√	x	O
		60	O	Δ	Δ	√	√		Δ
		80	x	Δ	x	O	√		x
Toluene		40	x	x	Δ	√	√	x	
		60			x	O	√		
		80				Δ	√		
Hydrogen sulfide	Aqueous Solution	40	√	√	√	√	√	√	√
		60	√	√	√	√	√	√	O
		80		√	√	√	√	√	
Sulfuric acid	90	40	O	√	√	√	√	O	√
		60	O	O	O	√	√	Δ	√
		80		Δ	O	√	√	x	O

O Negligibly affected X Not serviceable
 √ Not affected Δ Slightly affected but serviceable

AMERICAN VALVE TERMS, CONDITIONS & WARRANTY

SELLING POLICY

The possession of this catalog and or price lists by any person is not to be construed as an offer to sell him or anyone, the items listed herein at the price indicated. We reserve the right to limit quantities and accept all orders subject to our ability to fill. Our minimum order is \$100 net.

We will acknowledge the receipt of your order; however our acknowledgment does not constitute an agreement to fulfill or ship same in any specified time or at prices other than those in effect at the time of shipment or to fulfill same on items or products not in production. Our conditions and terms of sale are per the current price list at the time of the sale and no waiver, alteration or modification of these terms and conditions whether on buyer's purchase order or otherwise shall be valid unless the waiver, alteration or modification is specifically accepted in writing and signed by an authorized representative of Seller.

CANCELLATIONS

Orders accepted by Seller cannot be countermanded, cancelled, changed, or deliveries deferred except with the Seller's consent and upon terms that will indemnify Seller against loss.

RETURNED GOODS

We reserve the right to refuse acceptance of material returned without our written permission. Transportation charges must be prepaid on return shipments and our acceptance of same is subject to a 20% charge for rehandling plus any outgoing freight charges and any costs to put material into saleable condition. We reserve the right to issue merchandise credits for returned materials.

CLAIMS

Claim for shortage must be made within 20 days after receipt of shipment. Any shortage or damage should be noted on B/L or transport receipt when signing. Our proof of shortage is by weight of shipment and shortage claims are subject to such weight.

TERMS OF PAYMENT

2% cash discount, if paid on or before the 10th of the month following the date of invoice. A service charge of 1 1/2% per month will be charged on past due accounts beyond 30 days from date of invoice.

FREIGHT TERMS

Brass, Thermoplastic, HotStop, and Ameri-Connect Couplings	Full freight allowed on single orders of \$1250 or more within the continental United States (excluding Alaska & Hawaii)
3700 Series ball valves	May be combined with the above products to meet freight minimum in states east of Colorado
4000 Series ball valves	No free freight allowance except by prior arrangement with American Valve

Freight allowance for factory shipments only on protected through rates from origin to destination. No allowance on UPS, parcel post, or air shipments.

If requested to ship other than our choice, any additional freight charges incurred must be borne by customer.

DESIGN

American Valve reserves the right to change design, specification or materials without notice, due to a research and development program of continuous product improvement and reserves all rights to label products covered hereunder with appropriate directions or warnings as may be required in its opinion.

ILLUSTRATIONS

Catalog illustrations are representations of a certain size of each product line but do not necessarily represent all sizes in all details. We reserve the right to institute changes in materials, designs, and specifications, without notice in keeping with our policy on continuing product improvement.

WEIGHTS

Weights in catalogs, price schedules, quotations, and acknowledgements of all orders are approximate and in no sense guaranteed. They represent the average weight of products as made from patterns in use at time weights were compiled.

American Valve warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be the kind described in the order or price list and will be free of defects in workmanship or material for a period of one year from the date of delivery to you, our initial purchaser.

Should any failure to conform to this warranty appear within one year after the date of the initial delivery to our initial purchaser, American Valve will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with American Valve's recommendation and standard industry practice, correct such defects by suitable repair or replacement at American Valve's own expense. If any valve alleged to be defective, is returned to our factory at Greensboro, NC, it will be examined and, if found to be defective under the warranty, it will be replaced at no charge.



P.O. BOX 35229
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AMERICAN VALVE STATEMENT OF WARRANTY & LIMITATION OF WARRANTY

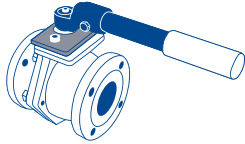
American Valve warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be the kind described in the order of price list and will be free of defects in workmanship or material for a period of one year from the date of delivery to the initial purchaser.

Should any failure to conform to this warranty appear within one year after the date of the initial delivery to our initial purchaser, American Valve will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with American Valve's recommendation and standard industry practice, correct such defects by suitable repair or replacement at American Valve's own expense. If any product alleged to be defective, is returned to our factory at Greensboro, NC, it will be examined and, if found to be defective under the warranty, it will be replaced at no charge.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESS OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of American Valve to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise, it is the intention of American Valve that no warranty of any kind, whether express or implied, shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: American Valve SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGES OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN ARE EXCLUSIVE, AND THE LIABILITY OF AMERICAN VALVE WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF GOODS UPON WHICH SUCH LIABILITY IS BASED.

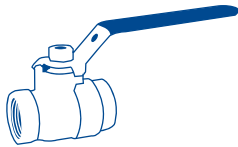
FAMILY OF PRODUCTS



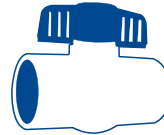
4000 Series Valves



3700 Series Valves



Brass/Bronze Valves



Plastic Valves



**Ameri-Connect
Flexible Connectors**



**Accord Ventilation
Air Registers & Grilles**



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